

## **FINANCIAL EXPOSURE: SOME THOUGHTS**

by

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### **Abstract**

Financial exposure refers to the amount of resources that can be lost in an investment. Different risks may be the cause of these loses. This paper discusses some of these as well as some of the factors affecting them. Derivatives are mentioned as a way to reduce risks.

Keywords: financial risk, hedging, risk factors, risk management, derivatives

### **Introduction**

In times of economic turmoil, when managing hedges, greater care and better tools are needed (Becker, Mazur, 1995). Efficient risk managing is, knowing among other things, were to invest, divest, and diversify.

### **Financial Risk**

Financial risk is a term used to evaluate the likelihood that an investor may lose money as a result of insolvency of any or all its investments in a business. It also refers to the situation were governments default bond payments.

Financial risks include, among other risks impacting investments, default risk, foreign investment risk, market and country risk, political risk, economic risk, exchange risk, transfer risk, bankruptcy risk, opportunity risks, and event risk. A brief description of the aforementioned follows.

Default risk, is the possibility that debtors will not pay all or part of their obligations when they become due. It also includes foreign investment risk, foreign monetary policies may hurt the investor's financial position. Other factors contributing are market and country risk. Market risk refers to possible losses due to market performance. Country risk refers to how likely are losses generated due to specific country characteristics. This last risk is impacted by many different aspects of life in a foreign land, including, among others, political risk, economic risk, exchange risk, and transfer risk.

There is also bankruptcy risk. Bankruptcy risk refers to the situation were a debtor becomes insolvent and cannot meet its obligations.

Investors must decide if risk is acceptable or not. Some risk is tolerated because the cost of eliminating it is high (as compared to the cost). It is important to study and understand the risk and how will it be impacted by paying to reduce or avoid it.

Investors will also want to consider the always feasible event and opportunity risks. Event risk is the possibility that a future occurrence may have a negative impact in future earnings of an investor or a whole industry. Opportunity risk is how likely it is that resources are committed, to a business alternative and cannot be redirected, and then other finer alternatives become available (Wagoner, 2002).

Risk must be assessed in a continuing basis. The more information gathered, will give an expanded capability to assess prospective future results (Greenspan, 1999). Investors must have all possible information, to successfully assess risks, the more the better (Cagan, 1999).

Offering a product that is well liked in the foreign market is only a part of the process. A company must research how the economies of selected countries.

When a multinational company measures financial risk their analysis must include factors contributing to those risks. These include interest rates, exchange rates, inflation rates, and trade treaties between the targeted countries. Some of the questions that must be answered are: what are the prevailing economic conditions? What are the major government policies affecting the economy in general and international trade in particular?

### **Foreign Investment**

A foreign country's rate of inflation can affect the cost of obtaining the raw materials and other components necessary for production. Inflation rates will affect the cost of obtaining financing. Higher inflation will also increase country risk. Foreign inflation will have an effect on the exchange rate of a country's currency. Products will appear cheaper to foreign customers paying with their local currencies. Conversely, if the targeted foreign country's currency experiences inflation imports paid in its currency will appear more expensive in that foreign country. This can have an adverse effect on the firm's production costs. If inflation increases, most exchange accords will be affected. Prospective agreements between the company and the foreign government or with foreign private enterprises will feel the effect of inflation and the decreased purchasing power of the local currency. As a result things such as the price paid for the lease of production facilities can be affected.

The cost of production of a company's proposed foreign subsidiary could also be affected by a number of country-related factors. Variations in the salary structure will affect the cost of products manufactured by the company. In many businesses that are not automated labor is a major component of the cost of goods manufactured. Changes in the rates paid or in the benefits earned by employees can cause a major change in the cost of goods manufactured which is a major component of the overall cost of most operations.

The company must understand that with increased businesses in the foreign country, at some point sooner or later wage increases will occur as well as increases in the benefits that must be given to the workers such as sick pay, severance pay vacations, medical and health benefits.

The more money is invested in a specific stock, the larger the risk. That is due to the volatility of individual stocks. With three general types of risk described by some economists, individual stocks are subject to market volatility, industry risk, and individual company risk. Market volatility describes the way a stock will rise or fall because of overall moves in the market. Industry risk is the degree to which a stock is affected by events related to its sector. Then there is the individual company risk, that is how a stock moves based on its own particular events (Wang, 2002).

### **Risk Factors increasing exposure**

Financial factors must be considered along with political and country risk factors when developing a model to reduce exposure. In general, situations that increase country risk discourage foreign investment. For entities already doing business in foreign countries regular assessments of country risk is also important. If country risk starts to increase the parent company may consider divesting.

Multinational corporations are usually unable to detect and predict big problems in the foreign countries where they intend to invest. Reliance on statistical methods may be the cause. These methods cannot evaluate subjective data that cannot be quantified. Furthermore, historical trends cannot always detect or anticipate crises in their gestation stages.

Other factors that must be considered when assessing country risk include government subsidies given by the targeted country's government to local industries. Also when acquiring goods, a question arises, will this foreign government favor domestic producers and severely restrict purchases of imported goods by its government agencies? Other considerations also include customs laws and administrative procedures regarding the country's imports and exports. These encompass a large variety of government policies and procedures that either discriminate against imports or favor exports.

It is also important to evaluate the political environment in the foreign country. An extreme case is the possibility of expropriation, by a foreign government, of some or all the operations established there. If it happens, what compensation, if any, would be received? Further analysis should determine if such events would take place peacefully or by force.

The income taxation issue is important. Will the corporation receive the same tax treatment as other local businesses in the foreign country? It is important to know what the tax rate will be and what rate will be charged on earned profits. The company must also determine if the foreign country imposes a tax on the repatriation of profits.

Risk is inherent in all business and financial activities. Companies are not sure that specific non-financial assets will be profitable. They are also uncertain about the flow of returns that the asset might generate. In general, uncertainty perceptions influence the discount factors in a way making the expectations of future earnings congruent with current

present values, or wealth (Greenspan, 1999).

The key to managing an information strategy without feeling like the sky is falling in is anticipation. It is imperative that the company anticipates the needs of its users, and take an active role in the filtering of information (Cagan 1999).

In an economy where supply and demand determine the prices of goods and services, risks evolve from holding assets or, claims to assets that are not hedged. Financial intermediation can redistribute and lower financial risk. This occurs because financial intermediation, eases diversification of risk and its redirecting (Greenspan, 1999).

### **Risk Exposure Management**

The key to the search for better risk management lay in the development of derivatives (Economist, 1993). When working with derivatives, however, investors should use only those that they understand and are in accordance with their risk management strategies. Derivatives are used to hedge or to speculate by trying to anticipate how market will behave. (Siems, 1998). This, always looking to make a profit.

Financial risk, such as exposure to interest rates, commodity or currency prices. The sharpest tools for managing these risks are derivatives (Economist, 1993.) A derivative is defined as an instrument used to hedge against price fluctuations of goods and /or services. It is a financial contract whose value depends on the values of one or more underlying assets or indices of asset values. This definition would include such instruments as mortgage-backed securities and collateralized mortgage obligations. However, generally refer more narrowly to contracts such as forwards, futures, swaps and options whose primary purpose is not to borrow and lend funds but rather to transfer price risks associated with fluctuations in asset values. Most contracts fall into one of four classes: foreign exchange, interest rate, commodity and equity. Very

recently, the first property and tax derivatives have been appearing (Economist, 1993). They are independent of operations such as acquiring currencies, goods, or to cover credit risks.

Derivatives include options, swaps, futures and forward contracts. (Siems, 1998).

In recent years there increased interest in risk management by insurance companies. Like other types of multinational they are also exposed to financial risk because of their operating and investing activities. Insurance companies collect premiums in advance for a promise to pay covered losses at an unknown time in the future. Premium volume and equity are invested in a variety of assets. Insurance companies invest mainly in fixed-income securities. To the extent these adverse effects can be associated with specific sources, they can be hedged with financial derivatives.

Managers are faced with the prospect of deciding what the financial risks are. It is important to decide what risks will be hedge and what instruments will be used. These risks present potential real problems that can lead to cash flow or insolvency problems. (Siems, 1998). Fine instruments used to guard against different financial risks exposures are derivatives.

Before using derivatives, however, managers must understand what their purpose is. These instruments are intended to hedge against the decrease in fixed-income assets, to better match asset/liability duration, to look in the current yield.

The financial risk management industry is a very specialized, information-intensive sector, with heavy demands for robust data (Cagan, 1999). If corporate officials decide to use derivatives, they should consider several facts. It is important to understand that the use of derivatives to mitigate financial risks can include resistance from policy decision makers to use that hedging approach. Then there is also the possible lack of qualified personnel with knowledge of derivatives. In addition, an internal control and review plan must be

established to monitor the use of derivatives. Finally, managers and employees must be trained in using derivatives. They must acquire the knowledge needed to deal with derivative's contracts, laws and regulations, and accounting procedures.

In order to better select the best way to reduce or eliminate financial risk managers must have up to date information about economic conditions in targeted areas and in the world in general. It is important to know levels of inflation, interest and, exchange rates, and other related factors that may influence the latter.

To be able to establish a long term strategy to guard their company against financial risks managers must consider a lot of varied, technical information. What is happening in prospective countries where investments are being considered? Information that must be evaluated includes unemployment and interest rates and long term risk rating. Evaluating the latter will hint how good its finances are (Roa, Garcia, et. al., 2009).

As an example of countries' varying conditions and how complex is the investment analysis, data from the United States, Germany, Spain, Sweden and, Switzerland, New Zealand Australia and Canada is presented.

This past August America's unemployment rate was 4.9 % the same number for 3 months. This statistic embodies 7.8 million workers. Men and women fare the same with 4.5 % unemployment. That's not the case with ethnicity. Whites experienced a 4.4 % unemployment rate while Asians had 4.2%, Hispanics 5.6% and African Americans 8.1%. People unemployed for more than two years are 2 million. This represents 26.1% of all unemployed. (U.S. Bureau of Labor Statistics Division of Labor Force Statistics, September 2, 2016)

Additional variables that may contribute to risk, are the specific economic conditions in different countries where a business venture might operate. Business confidence in the Euro area



improved has improved since 2001. Unemployment in Germany held steady at 6.4% in July 2016, compared with 4.7 a year ago. Germany's imports are €949bn and exports €1,196bn, with a surplus of € 248bn. (Official Labour Market Statistics, August 2016). Other parts of Europe have differing economic situations and unemployment rates (Statista, 2016). Spain, for example, has 20% unemployment rate (Instiuto Nacional de Estadistica) Sweden and, Switzerland, 3.2%. (Trading Economics, 2016).

In other locations around the world, New Zealand has 5.1% unemployment rate in July 2016 down from 5.7% by that date in 2013. Australia and Canada 5.7% and 7% respectively, for august 2016 Canada was 7% (Trading Economics, 2016).

All the latter are destinations were the level of social or political upheaval is not a threat to foreign investments. Depending on investor's goals, needs, and level of risk acceptable, some of these countries will appear inviting while others will not.

## **Derivatives**

By 1998, the 10 largest derivative players among U.S. banks holding companies, derivative credit exposure averages 15% of total assets. The average exposure is 49% of assets for those bank's loan portfolios. In other words, if those 10 banks lost 100% of their loans, the impact would be more than three times greater than if they had to replace all of their derivative contracts (Simens. 1998).

At the present time national derivatives amount to \$ 197.9 trillion, American banks hold a considerable amount of derivatives instruments. Credit exposure in the second quarter of 2015 was \$ 405.6 bn. (Office of the Comptroller of the Currency, Second Quarter, 2015).

Derivatives have a place in hedging investment risks. However they pose problems for those managers that do not know them. Interesting positions presented in literature tend to suggest that large numbers of derivatives increase risk. Li and Shaofang (2003) found that systemic risk increase with the use of derivatives. Similarly, Li and YU (September, 2010) found that derivatives increased risk. However they also found that increase numbers of these instruments could contribute to exceeding results. There are other authors (Mayordomo & Rodriguez-Moreno, August 2014) that affirming that some classes of derivatives do not contribute much to the systemic risk while others do.

## **Conclusion**

In working to reduce financial exposure risk, a well-planned long term investing strategy is paramount. Managers must understand the different factors contributing to these risks. Targeted markets must be studied with care, using available historical data. When and if investing conditions are no longer attractive, an exit strategy must be planned beforehand. To reduce financial risk, instruments like derivatives should be considered along with geographical and industry diversification.

## **References**

- Becker, B., Mazur, F. (1995). Risk management of financial derivative products: Who's responsible for what?. *Journal of Corporation Law*. (Volume 21), Issue 1, 177- 213.
- Cagan, P. (1999, February-March). Monitoring Volatile Markets. *Database Magazine*, 55-60.
- Greenspan, A. (1999, November 11). Measuring Financial Risk in the Twenty-first Century. *Vital Speeches of the Day*, 34-37.
- Instituto Nacional de Estadística (28/7/2016), Web site. *Economically Active Population Survey Second Quarter*. Retrieved September 10, 2016, from

[http://www.ine.es/dyngs/INEbase/en/operacion.htm?c=Estadistica\\_C&cid=1254736176918&menu=ultiDatos&idp=1254735976595](http://www.ine.es/dyngs/INEbase/en/operacion.htm?c=Estadistica_C&cid=1254736176918&menu=ultiDatos&idp=1254735976595)

International Banking, (1993, April). *The Economist*. pp. 9-11.

Labour market data of the Federal Statistical Office. (n.d.). Web site. Retrieved September 19, 2016, from [https://www.destatis.de/EN/FactsFigures/NationalEconomyEnvironment/LabourMarket/Methodology/Official\\_LabourMarket.html](https://www.destatis.de/EN/FactsFigures/NationalEconomyEnvironment/LabourMarket/Methodology/Official_LabourMarket.html)

LI, S. MARINČ, M. (2014, October). The use of financial derivatives and risks of U.S. bank holding companies. *International Review of Financial Analysis*, (35), 46-71, Oct. 2014.

Li, L. Yu, Z. (2010, September). The Impact of Derivatives Activity on Commercial Banks: Evidence from U.S. Bank Holding Companies. *Asia-Pacific Financial Markets. Volume 17*, (Issue 3), 303-322.

Mayordomo, S., Rodríguez-Moreno, M., Peña, J. I. (2014, August). Derivatives holdings and systemic risk in the U.S. banking sector. *Journal of Banking & Finance, Volume 45*, (Issue1-2), 84-104.

*OCC's Quarterly Report on Bank Trading and Derivatives Activities Second Quarter 2015*.(n.d.) OCC Web site. Retrieved September 16, 2016, from <https://www.occ.gov/topics/capital-markets/financial-markets/derivatives/dq215.pdf>

Roa, M., García, A. F., Bonilla, L. (2009, Fall). Country Risk Ratings and Financial Crises 1995 - 2001: A Survival Analysis. *Review of Business*, (Volume. 30), (Issue 1), 33-45. Database: Business Source Complete

Waggoner, J. (2002, April 2). What's your tolerance for risk? *Business Week*, 163-165.

Wang, P. (2002, April). 401(k) Fatal flaw. *Money*, 92-96.

Siems, T. F. (1998, March). 10 Misconceptions about financial derivatives. *USA Today Magazine*, 9- 11.

Statista, 2016. (n.d.) Web site. *Unemployment rate in the European Union and the Euro area from May 2015 to May 2016* (seasonally adjusted). Retrieved September 8, 2016 from <http://www.statista.com/statistics/264887/monthly-unemployment-rate-in-the-eu-and-euro-area/>

Trading Economics, Web site. (2016). Retrieved September 16, 2016, from <http://www.tradingeconomics.com/>

U.S. Bureau of Labor Statistics Division of Labor Force Statistics, Economic News Releases, *Employment Situation Summary*, (September 2, 2016). Retrieved on September 9, 2016 <http://www.bls.gov/news.release/empisit.nr0.htm>